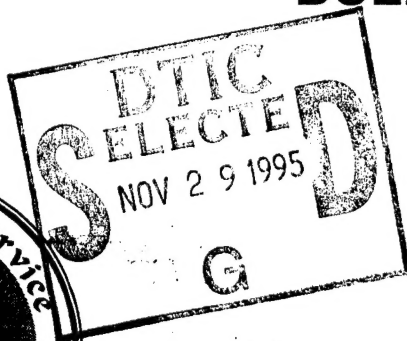


BULLETIN-95/001



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JAMES S. PERKINS

AWS Scientific and Technical Information Program Manager

8 November 1995

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BULLETIN 95-1

OCTOBER 1995

The AWSTL Accessions Bulletin Is Back.

We're pleased to announce that the publication of the AWS Technical Library Accessions Bulletin has resumed. For people new to Air Force Weather, the AWSTL Accessions Bulletin brings you the latest updates on the status of new and revised technical publications, between issues of our technical catalogs (TLAs). Because of the size and longevity of the publishing backlog, it's reprised in this bulletin. Recent library accessions of general interest are also included, along with tips for establishing automatic distribution for certain hard-to-get documents.

Cataloging AF Weather Publications.

As mentioned in our last bulletin (and in the last AWS technical catalog), we chose to close out the Catalog of Air Weather Service Technical Documents as of the end of 1991, the year in which the Air Weather Service was shorn of its wings and squadrons. That catalog includes all numbered technical documents published by AWS and its wings from 1941 through the end of 1991. In 1994, we published USAFETAC/TC—94/001, which lists all unclassified technical publications produced by AWS and its centers from 1992 through the end of 1993. This supplemental catalog was superseded by USAFETAC/TC—95/001 (see note), which lists AWS technical pubs issued through March 1995. **NOTE:** The cover number of this catalog, of course, should be USAFETAC/TC—95/001—not USAFETAC/TN—95/001. Please change it in ink on your copies to avoid confusion in ordering.

"Project Report" Designation Discontinued.

Most USAFETAC publications have been issued as either technical notes (TNs) or project reports (PRs). Since the distinction is transparent to users, documents that would have been published as project reports will, from now on, be issued as *technical notes*. The last project report published was USAFETAC/PR—94/

001, *ASPAM Baseline Study*, January 1994.

Regional Climatology Status.

The next regional to be published is *Southeast Asia*, a region that comprises Myanmar (formerly Burma), Cambodia (formerly Kampuchea), Thailand, Vietnam, Malaysia, Laos, and Singapore. Expect publication in the fall of 1995.

New and Revised PC Programs.

PC-0046A NITELITE for Windows Version 2.2. The new version includes saving default inputs, saving and recalling data files for various locations, upgraded print capabilities, and a night-vision goggle planning information. Version 2.2 corrects minor print format discrepancies discovered after Version 2.0 had been distributed.

PC-0061 INSOL, Version 1.0. INSOL calculates accumulated solar insolation at the surface and top of the atmosphere from time, location, and weather inputs. Accumulated values are produced at 15-minute intervals in calories-per-square centimeter. INSOL also produces solar elevation angles (in degrees) for each 15-minute interval.

PC-0062 MRCAT, Version 1.2.1 MRCAT (For MS-DOS only) uses data from the AWS Master Station Catalog and lets users display a selected weather station's WMO and ICAO designator, name, state/country, latitude, longitude, runway length and heading, and status. Users may search by ICAO or WMO identifier, or station name. Program also displays station tables for pressure altitude, crosswinds, and solar data. *Distribution limited to U.S. Government agencies only, administrative or operational use, July 1995. Other requests should be referred to AFCCC/DOO, 858 Buchanan St, Scott AFB IL 62225-5116.*

PC-0063 EOCLIMO. The CD-ROM version 1.0 of PC-0050A/B, EO-CLIMO is now available. This CD contains the entire EO-CLIMO database and can be used in place of the 120-plus diskettes of PC-0050A/B. No changes have been made to the program or data base. This CD gives access to a comprehensive electrooptical climatology dataset, for selected stations worldwide, rather than regions. Graphs provide monthly conventional and atmospheric transmittance climatology at 3-hourly intervals. Data for the 8-12 micron band are computer by LOWTRAN7. System requirements and start-up instructions are on the cover.

New Standard Summary Packages (SSPs).

New SSPs are available for Ft Lewis (Surface Observations Climatic Summary (SOCS), Temperature/Dewpoint (T/Td), Wind Stratified Conditional Climatology (WSCC)) Robins AFB (T/Td and WSCC); Incirlik AB (T/Td, WSCC) Aviano AB (SOCS, T/Td), Fairchild AFB (SOCS, WSCC).

AWS TR 240 Update.

The long-awaited *Forecasters Guide to Tropical Meteorology--AWS TR 240 Updated* is finally complete and should already be in the field. This document of more than 500 pages will be distributed to every Air Force weather unit in the world, as well as to Naval weather units and selected universities. Abstract follows.

New and revised technical publications.

AWS/TR—95/001 *Forecasters Guide to Tropical Meteorology--AWS TR 240 Updated*, by Dr Colin S. Ramage. AWS TR 240, by Maj Gary D. Atkinson, has served as the reference manual for USAF weather forecasting in the tropics since it was published in 1971. Although TR-240 has endured for the past 25 years, HQ Air Weather Service recognized the need for an update and contracted with tropical forecasting authority Dr Colin S. Ramage to produce one. Although a great deal of new material has been added to reflect new techniques and new technology, it still covers the basic facts of climatology, circulation, and synoptic models, with emphasis on analysis and forecasting techniques for the tropics. Physical factors that control tropical circulations are discussed briefly. The climatologies of pressure, winds, temperature, humidity, clouds, rainfall, and disturbances are

presented in a form especially suitable for forecasters. Analysis and forecasting of disturbances, cyclones, severe weather, terminal weather, etc., are treated at length. The use of climatology and the interpretation and use of weather satellite imagery are emphasized. Numerous figures adapted from the literature or prepared by the author illustrate all the essential facts and principles discussed. A summary of the state of the art and future outlook for tropical meteorology is included, along with an extensive bibliography.

USAFETAC/TN—95/002 *Estimating Ice Accumulation on Surface Structures*, June 1995, by William R. Schaub, Jr, 33pp. Proposes several methods for estimating ice accretion on surface structures based on estimates of several atmospheric variables. Also provides information on types of structural icing, ice accretion theory, and ice accretion computer models.

USAFETAC/TN—95/003 *The Modeled Curves (MODCURVES) Program*, July 1995, by Capts Thomas H. Elio, Anthony J. Warren, and Robert J. Falvey, 18pp. Describes USAFETAC's Modeled Curves (MODCURVES) computer program. Explains how Fourier analysis is used to model diurnal and annual curves of temperature, dew-point temperature, relative humidity, altimeter setting, and pressure altitude. Output is available in graphic or tabular format.

USAFETAC/TN—94/003 (AD-Pending) *DATSAV2 Quality Control--Version 8*, January 1994, 67 pp. Describes the automated quality controls applied to the worldwide surface weather observation database (DATSAV2) maintained by OL-A, AFCCC. The DATSAV2 database is made up of surface weather observations from around the world that have been collected from sources such as the Automated Weather Network and the Global Telecommunications System. The data as received has many known faults. The Air Force Global Weather Central at Offutt AFB, NE, begins the quality control process by "decoding" the data; i.e., by putting the data into common formats before using it in forecasting models and transmission to OL-A for storage. Upon receipt, OL-A processes the data through a sophisticated series of algorithms (Version 8 QC) that corrects most of the faults. The surface weather observation database is used routinely by AFCCC and OL-A analysts, as well as by a number

of other Department of Defense and federal government customers. The object of the quality-control process is to provide data that is consistently accurate and as fault-free as possible. **Still at OL-A for review.**

Scheduled publications for 1995.

USAFETAC/TN—95/004A *Comparison of Aircraft Icing Forecast Models*, by Capts Daniel Cornell, Christopher Donahue, and Chan Keith. Describes the results of a study that compared three operational algorithms for forecasting aircraft icing with actual pilot-reported icing. AFGWC's RAOB software was best, with 67 percent of type forecasts and 42 percent of intensity forecasts agreeing with pilot reports. The greatest degree of error was associated with forecasts of clear and mixed icing, and with moderate icing.

USAFETAC/TN—95/005 *Particle-Size Distributions for Atmospheric Sand and Dust Aerosols*, By Capt Gary L. Welch. Gives particle-size distributions for sand- and dust-based aerosols at various locations around the world. Also compares the horizontal and vertical extent of sand and dust storms, along with their frequencies of occurrence.

Capabilities, Products and Services of AFCCC. A revision of USAFETAC/TN—94/001.

Directory of Climatic Databases Available from OL-A, AFCCC. A revision of USAFETAC/TN—86/003.

Users Guide TO ASPAM (Atmospheric Slant-Path Analysis Model) Output, by TSgt Joan K. Bergmann. Offers a quick reference for reading USAFETAC's ASPAM output, which is provided to customers in the form of "point analyses."

Users Guide TO ASPAM (Atmospheric Slant-Path Analysis Model) Held Output, by Diane P. Johnson. Provides a breakdown of ASPAM "held output," and describes the processes that take place while ASPAM is running.

The Climatology of Cloud Statistics (C-CLOUD-S) Program. Describes AFCCC's C-CLOUD-S program, created to provide quick access to 15 cloud-cover statistics in four categories: (1) surface-observed

sky cover, (2) cloud-free line-of-sight, (3) satellite-based viewing, and (4) database variables.

German-to-English Glossary of Meteorological Terms, by Robert A. VanVeghel. A list of German meteorological terms and phrases translated to their English counterparts.

Lightning Climatology of the Contiguous United States, by William R. Schaub, Jr. This nationwide climatology of lightning was developed from a database of observed cloud-to-ground lightning strikes from March through October of 1986-1990. The data was organized with the Northern Hemisphere polar-stereographic quarter-mesh grid system used at the Air Force Global Weather Central. Summarized data for each grid point was used to produce graphic representations of the lightning-strike climatology. A user-friendly interactive computer program is available from the AWSTL--ask for PC-0044, SFERICS.

Lightning Climatology for Low-Level Flight Routes in the Western United States, by William R. Schaub, Jr. Provides cloud-to-ground lightning climatology, stratified by 700-mb wind directions, for five regions of the western United States selected for the density of their Air Force low-level flight routes. During the period of record used, there were more than 17 million lightning strikes recorded in these regions by Lightning and Lightning Protection (LLP), Inc, direction finders. The LLP equipment, which uses triangulation to locate lightning strikes, is the basis for the National Lightning Detection Network.

Lightning Climatology for Eglin AFB, FL, by Capt Brian M. Bjornen and William R. Schaub, Jr. Describes a USAFETAC-developed method for producing a climatology of cloud-to-ground lightning strikes in the Eglin AFB area. The climatological results are provided as computer-generated graphics.

Lightning Climatology for Nellis AFB, NV, by William R. Schaub, Jr. Describes a USAFETAC-developed method for producing a climatology of cloud-to-ground lightning strikes in the Nellis AFB area. The climatological results are provided as computer-generated graphics.

Lightning Climatology for Holloman AFB, NM, by William R. Schaub, Jr. Describes a USAFETAC-developed method for producing a climatology of cloud-to-ground lightning strikes in the Holloman AFB area. The climatological results are provided as computer-generated graphics.

Lightning Climatology for Maxwell AFB, AL, by Capt Christopher A. Donohue and William R. Schaub, Jr. Describes a USAFETAC-developed method for producing a climatology of cloud-to-ground lightning strikes in the Maxwell AFB area. The climatological results are provided as computer-generated graphics.

Maxwell AFB Thunderstorm Study, by Capt Robert A. Falvey. Describes a method by which discriminant analysis was used to develop regression equations relating the severe thunderstorm indices to the occurrence/non-occurrence of thunderstorms at Maxwell AFB, AL.

Maxwell AFB Fog Study, by Capt Matthew R. Williams. Describes a study that attempted to verify skill scores for five forecasting rules of thumb used at Maxwell AFB, AL. The study showed all five rules of thumb to have little or no skill, either annually or during the so-called "fog season."

Castle AFB Fog Study, by Maj Michael F. Remeika. Describes a study intended to provide an objective technique for forecasting when fog *will not* reduce visibilities below minimums at Castle AFB, CA, during the fog season. The study correlates upper-level pressure height and mean sea-level pressure with dense fog occurrence/non-occurrence over several fog seasons. The resultant scatter diagram has been useful in Castle AFB for forecasting; with modification, it may be useful at other locations.

Homogeneity of Cloud-Cover Climatology in Large-Scale Regions, by Capt Anthony J. Warren and Mr Charles R. Coffin. Describes the results of a study intended to evaluate the homogeneity of cloud-cover distributions within 18 regions known as "Consolidated Evaluation Groupings" or (CEGs). The sizes of these CEGs, which are composed of a variable number of smaller regions known as "Post-Mission Evaluation Regions (PMEs)," varied widely. A statistical comparison of the PMEs within each CEG provides a measurement of cloud climatology homogeneity.

Other publications in the Queue.

Two new climatic database users handbooks are also in the editorial queue: they describe the DATSAV2 Upper-Air database and the Satellite-Determined Vertical Moisture database. An AFGWC technical note that describes the AFGWC surface temperature model is also due out this year. Finally, the third interactive training package (of a three-package series prepared by Det 5, AWS) should be ready for distribution later this year.

Author Credit.

The staff of AFCCC's Readiness Branch regrets having omitted the name of one of the primary authors from several recent regional climatologies. TSgt Kenneth R. Gibson was a key contributor to USAFETAC/TN—94/005 (Southern Africa) and USAFETAC/TN—95/001 (Equatorial Africa). Gibson contributed to a number of other USAFETAC publications before his retirement in 1994.

Eglin Climatology.

Eglin Air Force Base Climatology (AD-B182405), by Harry L. Brano, is available from DTIC. Distribution is limited to U.S. Government agencies and their contractors; requests from other agencies should be directed to 46 OSS/OSWT, Eglin AFB FL.

Attention Non-FOA Air Force Weather Units!

To establish automatic distribution for certain materials you used to receive from the AWSTL, contact the following agencies direct:

ASTRONOMICAL ALMANAC

U.S. Naval Observatory
ATTN: Code AA (QMC Mike Fortier)
3450 Massachusetts Ave NW
Washington DC 20392-5420
DSN 294-1547

NWS TECHNICAL ATTACHMENTS

Central Region

NWS Central Region
ATTN: Debbie Haynes
601 East 12th Street Room 1836
Kansas City MO 64106
Commercial (816) 426-5400

Eastern Region

NWS Eastern Region
ATTN: SSD
630 Johnson Avenue
Bohemia NY 11716
Commercial (516) 244-0100

Western Region

NWS Western Region Headquarters
ATTN: SSD Technical Attachments
125 South State Street
Salt Lake City UT 84138
Commercial (801) 524-5131

NWS TECHNICAL PROCEDURE BULLETINS

National Weather Service
ATTN: W/OM23 (Debbie Greeley)
1325 East-West Highway
SSMC2 Room 13466
Silver Spring MD 20910
Commercial (301) 713-0462

DEFENSE MAPPING AGENCY (DMA) MATERIALS

The materials listed below are available from the Defense Mapping Agency. DMA customers must have an activity code and use special DMA product ordering software (GETAMAP). If your unit does not have an activity code, call or write:

Air Force Material Command
ATTN: 645 ABW/DMTX-2
5215 Thurlow Street
Wright Patterson AFB, OH 45433-5541
DSN: 787-7136 Commercial (513) 257-7136

When you have an activity code, call or write DMA to acquire GETAMAP, the software necessary for placing orders:

DMA Combat Support Center
6001 MacArthur Blvd D-67
Bethesda MD 20816-5001
DSN 287-2308 Commercial (301) 227-2308

DMA Publications--Type and Title

Tidal Current Table--Atlantic Coast of North America
NOSPBTCATCSTN
Tidal Current Table--Pacific Coast of North America
& Asia NOSPBCTPACAS

Tide Table--Central & Western Pacific Ocean & Indian
Ocean NOSPBTTCPACIN

Tide Table--East Coast of North and South America
including. Greenland NOSPBTTTECSTNSA

Tide Table--Europe & West Coast of Africa
NOSPBTEURAFR

Tide Table--West Coast of North and South America
including. Hawaii NOSPBTTWCSTNSA

Air Almanac AIRALMANAC

Nautical Almanac NAUTALMANAC

Location Indicators ICAO 7910

Location Identifiers FAATP735006KC01

Contractions FAATP734001NC01

Other Publications Sources.

Air Force weather units should go to their base or command librarian for general library services (atlases, subscriptions to journals, etc.). The following agencies can also provide a variety of useful products. They all charge for services and require their customers to establish a deposit account.

National Technical Information Service
(NTIS) 5285 Port Royal Road
Springfield VA 22161
Commercial (703) 487-4660

United States Government Printing Office
(GPO) Superintendent of Documents
Washington DC 20402
Commercial (202) 512-1800

National Aeronautics and Space
Administration (NASA) Scientific and
Technical Information Office
800 Elkridge Landing Road
Linthicum Heights MD 21090
Commercial (301) 621-0390

Defense Technical Information Center
(DTIC) Directorate of User Services
Bldg 5 Cameron Station
Alexandria VA 22304-6145
DSN 284-3848 Commercial (703) 274-3848

For information on these or any other sources of information, call/write:

Air Weather Service Technical Library
ATTN: Lisa Mefford
859 Buchanan Street
Scott AFB IL 62225-5118
DSN 576-2625 Commercial (618) 256-2625

Recent Accessions.

The following is a partial list of the many new books and other materials recently cataloged into the AWSTL collections. They are available for 30-day loan to individuals.

REFERENCE

International Meteorological Vocabulary, 1992.

ATLASES

Atlas of Pilot Charts, North Pacific Ocean / Defense Mapping Agency, 1994.

Atlas of the Middle East / Central Intelligence Agency, 1993.

Hammond Atlas of the Middle East, 1991.

States of the Former Soviet Union : an Updated Overview / Central Intelligence Agency, 1992.

ATMOSPHERIC SCIENCE

Aerosol-Cloud-Climate Interactions / Peter V. Hobbs, 1993.

Aerosol Effects on Climate / S. Gerard Jennings, 1993.

Analytic Conceptual Model of Extratropical Cyclones / L. C. Heijboer, 1993.

Antarctic Meteorology and Climatology / David H. Bromwich, Charles R. Stearns, 1993.

Atmosphere : An Introduction to Meteorology / Frederick K. Lutgens, 1992.

Atmospheric Boundary Layer Flows : Their Structure and Measurement / J. C. Kaimal, J. J. Finnigan, 1993.

Atmospheric Convection / Kerry A. Emanuel, 1994.

Bibliography of Urban Climate in Tropical, Subtropical Areas, 1981-1991 / Ernesto Jauregui, 1993.

Climate Dynamics of the Tropics / Stefan Hastenrath, 1991.

Climate Since A. D. 1500 / Raymond S. Bradley, Philip D. Jones, 1992.

Climatology : an Atmospheric Science / John H. Hidore, John E. Oliver, 1993.

Cloud Dynamics / Robert A. Houze, 1993.

Direct Impact of Atmospheric CO₂ Enrichment on Regional Transpiration / C.M.J. Jacobs, 1994.

Effective Cloud Cover Variations / Olavi Karner, Sirje Keavallik, 1993.

Forecasters Handbook for the Bering Sea, Aleutian Islands, and Gulf of Alaska / R. W. Fett, R. E.

Englebreton, D. C. Perryman.

Fundamentals of Atmospheric Energetics / Aksel Wiin-Nielsen, Tsing-Chang Chen, 1993.

Fundamentals of Weather and Climate / Robin McIlveen, 1992.

Further Development and Testing of a Second-Order Bulk Boundary Layer Model / Richard D. Krasner, 1993.

Geostrophic Wave Circulations / Yong L. McHall, 1993.

Global Climates Since the Last Glacial Maximum / H.E. Wright, Jr., 1993.

Global Physical Climatology / Dennis L. Hartmann, 1994.

Hurricane Hugo : Puerto Rico, the U.S. Virgin Islands, and Charleston, South Carolina, September 17-22, 1989 / Joseph H. Golden, Earl J. Baker, 1994.

Hurricane Research Division Fiscal Year 1994 Programs - Fiscal Year 1995 Plans / NOAA, 1994.

Hurricanes / Peter Chaston, 1993.

Image 2.0 : Integrated Modeling of Global Climate Change / Joseph Alcamo, 1994.

Interactions Between Global Climate Subsystems : the Legacy of Hann / G.A. McBean, M. Hantel, 1993.

Introduction to Circulating Atmospheres / Ian N. James, 1994.

Introduction to Forecasting / Naval Oceanographic Office, 1994.

LADM : A Lagrangian Atmospheric Dispersion Model / W.L. Physick, 1994.

Meteorology and Numerical Analysis : Collected Papers of Lewis Fry Richardson / P.G. Drazin, 1993.

Meteorology Today : An Introduction to Weather, Climate, and the Environment / C. Donald Ahrens, 1991.

Microphysical Processes in Clouds / Kenneth C. Young, 1993.

Physics of Waves / Howard Georgi, 1993.

Representation of Cumulus Convection in Numerical Models / Kerry A. Emanuel, David J. Raymond, 1993.

Role of the Stratosphere in Global Change / Marie-Lise Chanin, 1993.

Sea Breeze and Local Winds / John E. Simpson, 1994.

Significant Tornadoes, 1680-1991 / Thomas P. Grazulis, 1993.

Tornado / Stephen Kramer, 1992.
 Tornado! : 84 Minutes, 94 Lives / John M. O'Toole, 1993 (VCR tape).
 Tornado Video Classics / Thomas Grazulis, 1992.
 Tornado Video Classics. II. The Magnificent Puzzle / Tornado Project, 1993.
 Tropical Cyclone Development and Intensification Under Moderate to Strong Vertical Wind Shear / Debra K. Smith, 1994.
 Tropical Meteorology / G. C. Asnani, 1993.
 Tropospheric Chemistry of Ozone in the Polar Regions / H. Niki, K.H. Becker, 1993.
 Understanding Climate : Selected Works of Yale Mintz / J.R. Bates, 1993.
 Variability of the South Florida Mean Annual Surface Air Temperature During the Last Three Decades / Stanley L. Rosenthal, 1993.
 Weather Analysis / Dusan Djuric, 1994.
 Weather Book / Jack Williams, 1992.
 Weather Patterns and Phenomena : A Pilot's Guide / Thomas P. Turner, 1994.
 WMO and the Ozone Issue / World Meteorological Organization, 1992.
 WMO Long-Term Plan : Overall Policy and Strategy 1992-2001 / World Meteorological Organization, 1992.
 Workbook of Atmospheric Dispersion Estimates : An Introduction to Dispersion Modeling / D. Bruce Turner, 1994.

CONFERENCES

Atmospheric Propagation and Remote Sensing III : 5-7 April 1994, Orlando, Florida / Walter A. Flood, Walter B. Miller, 1994.
 Atmospheric Radiation Measurement (ARM) Science Team Meeting (3rd : 1993 : Norman, OK), Dept. of Energy, 1994.
 Battlefield Atmospherics Conference (1993 : Las Cruces, N.M.) / Edward D. Creagan, 1994.
 Climate Assessment (5th : 1993), National Weather Service / M. S. Halpert, 1994.
 Commission for Marine Meteorology. Session (11th : 1993 : Lisbon, Portugal), World Meteorological Organization, 1993.
 Conference on Atmospheric Chemistry (1994 : Nashville, Tenn.), AMS, 1994.
 Conference on Atmospheric Radiation (8th : 1994 : Nashville, Tenn.), AMS, 1994.
 Conference on Climate Variations (6th : 1994 :

Nashville, Tenn.), AMS, 1994.
 Conference on Mesoscale Processes (6th : 1994 : Portland, Oregon), AMS, 1994.
 Conference on Numerical Weather Prediction (10th : 1994 : Portland, Oregon), AMS, 1994.
 Conference on Satellite Meteorology and Oceanography (7th : 1994 : Monterey, Calif.), AMS, 1994.
 Conference on Severe Local Storms (17th : 1993 : St. Louis, Missouri), AMS, 1993.
 Conference on Weather Analysis and Forecasting (13th : 1993 : Vienna, Virginia), WMO, 1993.
 Eastern Snow Conference (50th : 1993 : Quebec City, Quebec).
 Glaciers--Ocean--Atmosphere Interactions : Proceedings of the International Symposium Held at St. Petersburg, 24-29 September 1990 / V. M. Kotlyakov, A. Ushakov, A. Glazovsky, 1991.
 Institute of Environmental Sciences. Technical Meeting (40th : 1994 : Chicago, Ill.).
 International Conference on Aviation Weather Systems (5th : 1993 : Vienna, Virginia), AMS, 1993.
 International Conference on Development and Application of Computer Techniques to Environment Studies (4th : 1992 : Portsmouth, England) / P. Zannetti, 1992.
 International Conference on East Asia and Western Pacific Meteorology and Climate (1992 : Hong Kong) / W. J. Kyle, C. P. Chang, 1993.
 International Conference on Infrared Physics (5th : 1993 : Switzerland).
 International Conference on Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology (10th : 1994 : Nashville, Tenn.), AMS, 1994.
 International Radiation Symposium (1992 : Tallinn, Estonia) / Sirje Keervallik, Olavi Karner, 1993.
 International Tsunami Symposium (15th : 1991 : Vienna, Austria) / Stefano Tinti, 1993.
 Prediction and Perception of Natural Hazards : Proceedings, Symposium, 22-26 October 1990, Perugia, Italy / J. Nemec, J. M. Nigg, F. Siccardi, 1993.
 Proceedings of a Workshop Held at ECMWF on Stratosphere and Numerical Weather

Prediction : 15-17 November 1993 / European Centre for Medium-Range Weather Forecasts, 1994.

Symposium on Global Change Studies (5th : 1994 : Nashville, Tenn.), AMS, 1994.

Workshop on Meteorological Operational Systems (4th : 1993 : European Centre for Medium-Range Weather Forecasts), ECMWF, 1994.

COUNTRY STUDIES

Albania, Bulgaria, Ethiopia, Guyana and Belize, Indonesia, Nepal and Bhutan, Nicaragua, North Korea, Peru, Poland, Portugal, Saudi Arabia, and Zaire.

ENVIRONMENTAL ASPECTS

Agricultural Dimensions of Global Climate Change / Harry M. Kaiser, Thomas E. Drennen, 1993.

Climate and Global Change / J. C. Duplessy, A. Pons, R. Fantechi, 1991.

Climate-Biosphere Interactions : Biogenic Emissions and Environmental Effects of Climate Change / Richard G. Zepp, 1994.

Climatic Change and the Mediterranean : Environmental and Societal Impacts of the Mediterranean Region / L. Jeftic, J. D. Milliman, G. Sestini, 1992.

Dictionary of Global Climate Change / W. John Maunder, 1992.

Earth System Responses to Global Change : Contrasts Between North and South America / Harold A. Mooney, Eduardo R. Fuentes, Barbara I. Kronberg, 1993.

Energy and Water Cycles in the Climate System / Ehrhard Raschke, Daniela Jacob, 1993.

Environmental Statistics, Assessment, and Forecasting / C. Richard Cothorn, N. Phillip Ross, 1994.

Global and Regional Changes in Atmospheric Composition / Erno Meszaros, 1993.

Global Environmental Change : an Integrated Modelling Approach / Michael den Elzen, 1994.

MILITARY ASPECTS

Gulf War Aftermath : an Environmental Tragedy / Muhammad Sadiq, John C. McCain, 1993.

Gulf War Air Power Survey / Sec. of the Air Force, 1993-94.

Gulf War Air Power Survey. Summary Report / Thomas A. Keaney, Eliot A. Cohen, 1993.
Weather and War / T.A. Fitzpatrick, 1992.

MISCELLANEOUS

Applied Groundwater Modeling : Simulation of Flow and Advective Transport / Mary P. Anderson, William W. Woessner, 1992.

Encyclopedia of Earthquakes and Volcanoes / David Ritchie, 1994.

Fractal Models in the Earth Sciences / G. Korvin, 1992.

Handbook of Agricultural Meteorology / John F. Griffiths, 1994.

Newly Independent States of Eurasia : Handbook of Former Soviet Republics / Stephen K. Batalden, Sandra L. Batalden, 1993.

Nonlinear Statistical Models / Andrej Pazman, 1993.

Nonlinear Systems / P. G. Drazin, 1992.

Optimization Techniques in Statistics / Jagdish S. Rustagi, 1994.

Perturbation Methods / E. J. Hinch, 1991.

Statistics in Plain English : With Computer Applications / Robert S. Schulman, 1992.

Techniques for Determining Probabilities of Geologic Events and Processes / Regina L. Hunter, C. John Mann, 1992.

Volcanoes : Passion and Fury / Stephen James O'Meara, Donna Donovan-O'Meara, 1994.

OCEANOGRAPHY

Atmosphere-Ocean Interaction / Eric B. Kraus, 1994.
Marine Physics / Jerzy Dera, 1992.

Modelling Oceanic Climate Interactions / Jurgen Willebrand, David L.T. Anderson, 1993.

Ocean Processes in Climate Dynamics : Global and Mediterranean Examples / Paola Malanotte-Rizzoli, Allar R. Robinson, 1994.

Oceanography : a View of Earth / M. Grant Gross, 1993.

Oceanography : an Invitation to Marine Science / Tom Garrison, 1993.

Results With a Coupled Wind Wave Model / Peter A.E.M. Janssen, 1994.

PRECIPITATION

Atlas of Frequency Distribution, Auto-Correlation and Cross-Correlation of Daily Temperature and Precipitation at Stations in the U.S., 1948-1991 (in Metric Units) / Anthony G. Barnston, 1993.

Catalogue of Heavy Rainfall Cases of Six Inches or More Over the Continental U.S. During 1993 / Richard Borneman, Charles Kadin, 1994.

Climatological Atlas of Snowfall and Snow Depth for the Northeastern United States and Southeastern Canada / Richard P. Chamber, Daniel S. Wilks, 1993.

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What's the future hold for AWSTL?

Budgetary constraints, new technologies, and periodic redirecting of roles and missions mean that every Air Force organization will certainly be doing their job in different ways in the future. Some organizations will cease to exist. We at the AWSTL consider support to Air Force weather units one of our key and essential functions no matter what direction our future takes, and we're pleased that Air Force leadership characterizes us as a "national asset" in that regard. The AWSTL will continue to exist, and will exploit new technologies to deliver to you the weather warfighter the information you need to win ... anytime, anywhere, on demand! However, to do that efficiently enough to make our efforts truly "force-enhancing," we need to know what we're doing right and wrong. You can help us.

Below is a list of products and services now available to the military meteorology community from the AWSTL.

Products & Services

Some of the products and services of the AWSTL include the following:

- Rapid access to the AWSTL's collection of nearly 500,000 books, periodicals, theses, reports, programs, microfiche, CD-ROMS, maps, etc.
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- Release approval of certain meteorological information to foreign governments.

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The AWSTL exists to provide technical advice and help in the form of access to current and historical scientific and technical information, to all agencies supported by the Air Force Weather System. We will continue to do that in order to arm you, the military weather professionals, with information you need to provide the winning edge. How the AWSTL will do that is evolving, but we're here now, and we'll be there for you in the future.

New library staff.

Since the last issue of this accessions bulletin, there have been a number of changes in the AWSTL staff. Mr James S. Perkins is the new director of the AWSTL. He enjoyed a 20-year career in the Air Weather Service as a bibliophilic aerospace sciences officer, aerial reconnaissance weather officer, and staff weather officer. Perkins joins us after teaching for several years.

In addition to a new library director, the publishing team has made several changes on the staff. Mr George Horn, technical editor and team chief, retired after 10 years at the AWSTL. His knowledge, personality, and broad range of interests made him a great source of help to Air Force weather units. Best wishes, George!

During the last year, three new people have virtually taken over the publishing team. The first addition was SSgt. Lela Hartman, a graphics specialists and recent promotee. The graphics specialists position had remained unoccupied for nearly a decade until Hartman arrived. Next came Ms Kristine Byrnside, an experienced writer and editor who replaced Ms Rita Markus as the editorial assistant for the publishing team. The most recent addition to the team was Mr Horn's replacement, Mr Gene Newman. He assumes duties as our new technical editor and team chief, and brings with him great experience in military meteorology and scientific writing. Newman's most recent accomplishment was working on the well-know AWSP 105-56, *Meteorological Techniques*.

Distribution list.

You'll notice there is no longer attached a 20-page list of every weather unit, DoD organization, government agency, university, authorized contractor, etc., to which we send our AWSTL Accessions Bulletin. We're saving lots of paper costs by eliminating the unnecessary list. If you used the list to update your own mailing lists, fear not—you're welcome to borrow our by contacting Mr Charlie Travers at DSN 576-5023. All we ask is that you promise in return to keep us informed of any address changes. Please use the form attached to do so.

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